

Exelon Generation Company, LLC (“Exelon”) is providing the following comments to the Pennsylvania Department of Environmental Protection (“PADEP”) on the Draft National Pollutant Discharge Elimination System (“NPDES”) permit No. PA0013714 for Eddystone Generating Station (“Eddystone”). Consistent with the public comment instructions in Volume 50 Number 29 of the Pennsylvania Bulletin published on July 18, 2020, these comments are timely filed.

#### **Draft NPDES Permit Page 1**

The address listed, 300 Exelon Way, Kennett Square, PA 19348-2473, is the business address for Exelon’s corporate offices. All correspondence regarding this permit should be sent to:

Eddystone Generating Station  
1 Industrial Highway  
Eddystone, PA 19022

Exelon respectfully requests that PADEP replace the corporate address with the facility’s address when issuing the final permit.

#### **Draft NPDES Permit Pages 6 and 7, Part A Section I.E – Outfall 008**

PADEP is proposing to require additional monitoring for both total copper and total lead at Outfall 008, through the proposed requirement to collect a 24-hour composite sample once per quarter and report the daily maximum value. For each of the parameters, the maximum end-of-pipe value reported in Exelon’s 2019 NPDES application is lower than the most stringent of the respective numeric water quality criterion for copper and lead.

Exelon notes water quality-based effluent limitations are rightfully applied at the end of a mixing zone and not at the end of the pipe. PADEP’s rationale for requiring additional monitoring for these parameters is the absence of sufficient water for mixing. Exelon questions this rationale. Exelon specifically designed and constructed Outfall 008 to discharge approximately 300 feet from the shoreline at the bottom of the Delaware River Estuary, at a point where the River is approximately 36 to 40 feet deep depending on the tide to ensure rapid mixing of the once-through cooling water (Sections IV.B.8 and VIII.F.4 of the §316(b) Report).

While no specific modeling study has been conducted to determine the mixing for these metals, the Delaware River flow upstream of Eddystone at the Trenton gauge (the gauge closest to Eddystone) averaged 12,549 cubic feet per second, or 8,110.6 million gallons per day (“MGD”), between 1970 to 2017, as discussed in Section IV.A.2.a of the §316(b) Report, which is an order of magnitude greater than the design intake flow of 835.2 MGD (i.e., an approximately 10:1 ratio). Therefore, Exelon questions the reasoning for the requirement stated on page 22 of the draft Fact Sheet that “the amount of discharge is very high compared to the flow available for dilution”. Moreover, modeling for the thermal

plume confirms that there is substantial mixing that occurs at this location (see Sections VIII.F.4 and X.C.2 of the §316(b) Report).

Given that the end-of-pipe values for copper and lead reported in Exelon's 2019 NPDES application are lower than the most stringent water quality criterion for each parameter, it is highly unlikely that there would be reasonable potential that the water quality criterion for either parameter would be exceeded at the edge of the mixing zone, if one were to be established. Therefore, Exelon requests that the sampling and reporting requirements for total copper and total lead at Outfall 008 be suspended if the data collected during the first year of sampling are below the applicable water quality criterion for each parameter.

Exelon respectfully requests the following footnote be added to the "Minimum Measurement Frequency" cells for both total copper and total lead:

Monitoring and reporting requirements for this parameter shall be suspended upon collection and reporting of four quarterly samples indicating that the values in the effluent are below the most stringent applicable water quality criterion for the parameter.

#### **Draft NPDES Permit Page 18, Part A Section III.B.5**

The Supplemental Report – Cooling Water Intake Monitoring form will be completed and submitted as an attachment to the Discharge Monitoring Report each month through PADEP's eDMR system. Exelon notes that many of the values identified on this form are not applicable to Eddystone. Accordingly, Exelon intends to report actual intake flow and capacity utilization rate data on a monthly basis and will therefore use two columns titled "Actual Intake Flow" and "Capacity Utilization Rate."

#### **Draft NPDES Permit Page 38, Part C Section V.E**

The Standard Operating Procedure ("SOP") for pump operation was included in Section V.B of the §316(b) Report submitted with the 2019 NPDES application. This SOP is also included under Part C Section V.F of the draft NPDES permit. Exelon requests the permit language under Part C Section V.E be revised as follows:

To meet Best Technology Available (BTA) requirements to minimize adverse impacts from impingement and entrainment the permittee will maintain an average 24-month capacity utilization rate (CUR) of less than 8% and operate in accordance with a the Standard Operating Procedure (SOP) submitted with the application under Section V.B of the §316(b) Report that will result in an estimated reduction in IM of approximately 79%.

**Draft NPDES Permit Page 39, Part C Section V.H**

Exelon will copy PADEP on electronic submission via email of annual impingement and entrainment data reports submitted to the National Marine Fisheries Service under the Individual Incidental Take Permit (“IITP”). These annual impingement reports<sup>1</sup> will contain data on Atlantic and shortnose sturgeon and the annual entrainment reports will provide data on Atlantic sturgeon. Exelon requests the permit language under Part C Section V.H be revised as follows:

All impingement or entrainment sampling data collected in accordance with the Individual Incidental Take Permit (IITP) shall be submitted via annual reports to the PA DEP Southeast Regional Office within 90 days following each calendar year of IITP sampling-upon completion.

**Draft NPDES Permit Page 39, Part C Section V.I**

Part C Sections V.E and V.F of the draft NPDES permit recognize potential impacts from impingement and entrainment will be minimized by managing operation of both the river water pumps (“RWP”) and circulating water pumps (“CWP”). The SOP under Part C Section V.F requires Exelon to limit operation of the CWPs for Essential Station Operations (startup, operations, shutdown and certain maintenance activities). This language is consistent with the requirements of the IITP. However, the language in Part C Section V.I.1 indicates that PADEP is proposing to require impingement monitoring no less than biweekly during peak abundance of impingeable fish and shellfish. Consistent with the SOP in Part C Section V.F of the draft NPDES permit, the IITP requires impingement monitoring only when the pumps are running for Essential Station Operations. Operating the CWPs solely for the purpose of impingement monitoring would violate the requirements of the IITP and of Part C Section V.F of the draft NPDES permit; therefore, Exelon will only run pumps for Essential Station Operations.

To avoid violating the conditions of its IITP and its SOP for achieving compliance with its impingement mortality compliance option under 40 CFR 125.94(c)(12), Exelon will identify and enumerate all species collected in impingement samples during monitoring conducted for the IITP for a period of two years, but cannot increase the number of sampling days beyond the sampling schedule required by the IITP.

The Draft Permit did not specify reporting deadlines. Therefore, Exelon proposes to provide an interim annual data report to PADEP within 90 days following completion of the first full calendar year of impingement data collection that will identify and enumerate all species impinged. Within 90 days following completion of the second full calendar year of impingement data collection, Exelon will provide PADEP with a final data report identifying and enumerating all species impinged. This final report will also include a

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<sup>1</sup> Exelon will also provide PADEP with annual impingement data reports for all species impinged, as discussed in the comment below on Part C Section V.I.

comparison to results from the 2005-2006 Eddystone impingement sampling. The 90-day timeframe will allow sufficient time to compile and analyze each year's worth of data, and, in the case of the final report, assess whether there has been a change in impingement impacts since collection of the 2005-2006 data.

Exelon, therefore, requests the permit language under Part C Section V.I be revised as follows, which proposed change includes moving the prior subparagraph 4 text to subparagraph 1 and incorporating additional information on the IITP monitoring plan:

1. Within one year of the permit effective date, the permittee shall submit an impingement sampling plan to the Department. In lieu of a separate study, impingement sampling conducted in accordance with the IITP may be used with prior approval of a study plan by the Department. The impingement sampling study plan shall include details regarding the permittee's collection of 2 years of impingement data for each species, including shellfish, over a 24-hour period following the impingement sampling schedule required by Eddystone Generating Station's National Marine Fisheries Service Incidental Take Permit No. 23148, which is as follows: and no less than biweekly during peak abundance of impingeable fish and shellfish.
  - a. 1 day per week during each week in which Eddystone circulating water pumps run for Essential Station Operations for one or more days (with a day equal to 24 hours of pump operation), and
  - b. No sampling during each week in which Eddystone circulating water pumps do not run on any day (with a day equal to 24 hours of pump operation) for Essential Station Operations.
2. The impingement sampling shall be completed during the period identified above after Department approval of the impingement sampling plan.
3. ~~Impingement sampling results shall be submitted to the Department within 30 days of receipt by the permittee.~~ An interim annual data report covering all species impinged shall be submitted to the Department within 90 days following completion of the first full calendar year of impingement data collection. A final two-year data report covering all species impinged shall be submitted to the Department within 90 days following completion of the second full calendar year of impingement data collection. The final data report shall include an analysis comparing the results from the current study to the results from the 2005-2006 Eddystone impingement sampling.
4. ~~In lieu of a separate study, impingement sampling conducted in accordance with the IITP may be used with prior approval of a study plan by the Department.~~